(e) In the developed countries like the USA, private sector participation for nuclear power generation is common.

Reserves of Uranium

254. SHRI SANJAY DALMIA: Will the PRIME MINISTER be pleased to state:

(a) whether there are huge reserves of uranium at some places in the country;

(b) if so, the locations of these places with quantum of Uranium exploited so far;

(c) whether Government propose to explore the availability of Uranium at more places in the country;

(d) if so, the details thereof; and

(e) if not, the reasons therefor?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI): (a) and (b) The Atomic Minerals Division (AMD) of the Department of Atomic Energy has identified uranium reserves totalling 78,000 tonnes of uranium oxide, in indicated and inferred categories at Singhbhum District (Bihar), West Khasi Hills District (Meghalaya), Cuddapah and Nalgonda Districts (Andhra Pradesh) and Rajnandgon and Surguja Districts (Madhya Pradesh).

Three deposits viz., Jaduguda, Bhatin and Narwapahar, Singhbhum District (Bihar), are being exploited by the Uranium Corporation of India Ltd. (UCIL).

(c) Yes Sir.

(d) The Atomic Minerals Division continuously carries out surveys and exploration for uranium in different parts of the country in various environments. During the course of survey and exploration in the recent past, significant uranium occurrences have been located in Udaipur District (Rajasthan), Sidhi District (Madhya Pradesh) and Sonbhadra District (Uttar Pradesh) where further detailed investigations are in progress.

(e) Does not arise.

Target for nuclear power generation

255. SHRI RAHASBIHARI BARIK: Will the PRIME MINISTER be pleased to state:

(a) the target set for the generation of nuclear power by the end of Eighth Five Year Plan;

(b) the achievement made in that regard so far;

(c) whether Government have drawn up any new programme to increase nuclear power generation; and

(d) if so, the details thereof?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHUVNESH CHATURVEDI): (a) A total cumulative installed nuclear generation capacity of 2600 MWe targetted for achievement by the end of the Eighth Five Year Plan period.

(b) The present installed nuclear power capacity is 1720 MWe. With the expected commissioning of Kakrapar-unit 2 (220 MWe) by December 1994 the total installed capacity in 1995 would be 1940 MWe. Construction work at Kaiga 1 & 2 (2x220 MWe) and Rajasthan 3 and 4 (2x220 MWe) is in progress, with targetted criticality by June 1996/December 1996 and November 1996 and May 1997 respectively.

(c) and (d) The programme for increasing nuclear power generation includes setting up of the Tarapur 2x500 MWe units, 4 units of 220 MWe

at Kaiga Kaiga 3 to 6) and 2 units of 500 MWe at Rajasthan (RAPP 5 & 6) and the 2x1000 MWe project at Kundankulam in Tamil Nadu. Site clearances from environmental and safety angles have been received from the Ministry of Environment and Forest as well as the Atomic Energy Regulatory Board for these projects. The implementation of these projects will depend on avajlablity of funds.

Threat of radiation leak from nuclear

256. SHRI VIREN J. SHAH: Will the PRIME MINISTER be pleased to state:

(a) whether Government's attention had been drawn to the newsitem which appeard in the Pioneer of September 22, 1994 under the caption, "Threat of radiation leak from Nuclear reactors";

(b) if so, what are the facts and relevant details in this regard;

(c) what remedial steps Government have already taken or propose to take to obviate the chances of the occurrence of the apprehended rupture and consequential leakage of dangerous radioactive material;

(d) whether problems with the pressure tubes in India's Canada reactors were discovered during a meeting of Canadian engineers and their Indian counterparts in Bombay in February;

(e) if so, what remedial measures were considered and how far these measures were taken subsequently; and

(f) what safety measures have so far been taken or proposed to be taken and what is the present position?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI BHANWAR CHATURVEDI): (a) The Government is aware of the news item in the Pioneer dated 22nd September, 1994 which refers to Canadian concern about the condition of the pressure tubes and hence safety of the nuclear reactors in Rajasthan.

(b) The two Pressurised Heavy Water reactors in Rajasthan are the first of a series and were built in collaboration with Canada. The second unit has been in commercial operation since April, 1981. After information became available about rupture of pressure tubes in the Canadian reactors, monitoring, analysis and determination of the health of the tubes were intensified by the Nuclear Power Corporation and the Department of Atomic Energy. There has been no such rupture of pressure tubes in any of the Indian reactors.

(c) As the 2nd unit in Rajasthan is in commercial operation since 1981, based on the result of the continuous monitoring, the Nuclear Power Corporation has taken up exhaustive inspection of the coolant channels. Based on the results of the inspection, laboratory tests and analysis thereof, the Unit which is presently under shut down, will be restarted only if the health of the pressure tubes is acceptable. Otherwise the pressure tubes will be replaced by taking a longer shut down.

(d) to (f) India was fully aware of the possibilities of problem arising in the pressure tubes due to degradation in the strength of these tubes. These pressure tubes have been continuously monitored. During the Bombay meeting of February 1994 and subsequent meeting in IAEA, Vienna more detailed information on the problems faced by the pressure tubes of the reactors were exchanged. The Department has provided improved pressure tube material namely Zirconium Niobium alloy for the reactors commencing from Kakrapar Unit-2. In addition, improved design provisions to maintain ade-